GEORGE W WOODRUFF III© E.L.|C.E.

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Strategic Systemic Engineering Management, Creative Technical Design

Use "Profound Knowledge" to:

1) Know resource availability; 2) Know customer needs; 3) Quantify process data for maximum impact & organizational priorities; 4) Appreciate suppliers for process lubrication; 5) Reduce systemic variability early in the process ∴ cheapest & sets the baseline; 6) Find options to open-up bottlenecks; 7) Use intrinsic motivation for teamwork cohesion; 8) Create a rhythm of long-term thinking, standardization & simplification; 9) Deliver customer needs and; 10) Innovate purposely.

Professional Experience

Edge of Alignment, LLC	**Pepperell, MA, USA**
Owner, Designer, Author, Creator	2021 – Present

Created a new language – defined its orthography & quantification; Designed numerous fonts, glyphs & runes; Created multiple architectural layouts & 3-D models; Authored numerous manuscripts & image-processing macros. Designed, crafted a 7-string musical instrument and; Created a 2-D rhythm video game; the soundtrack & artwork for PC, available on Steam.

> WOODRUFF III, G. W, (2023) Liber Clear. Internet Archive. (Series of Illuminated Manuscripts)
> WOODRUFF III, G. W, (2023) *"The Guatama."* (7-string musical instrument)
> WOODRUFF III, G. W, (2022). *PC-Game: Thumb-Thump.* Steampowered.

Metamagnetics, Inc.	**Marlborough, MA, USA**
Manager, Engineering Operations	2023 – 2024

Defined, established, documented and engineered an entire Manufacturing Department; Equipment & Process Qualification, Executive-level, comprehensive Risk Analysis; Engineering Excellence Award champion; promoted, w/ four direct reports; statistically modeled key spec limits; and provided double-expert systems, investigations, recommendations and solutions. Coordinated and installed entire metrology, quality, manufacturing processes; leading ambassador to inter-departmental process cohesion and; the chief technical resource for DoD program management, collaborating priorities; facility layout and utility needs with manufacturing yield progress. Efficient sequential mirror-structure of soft: hard tools, trainings, 5S, BOM.

Cleanpart East	**Southbridge, MA, USA**
Process Engineer	2022 – 2023

Equipment & Process Qualification; Determined Systemic WIP Limitations; Modeled production as Tetris® video game; Devised Engineering 'Package' for Customer Quality organization: Wet-etch, TWAS, Texture Blast OPS.

Skills

Software: *Basic [VBA, Visual Basic, C++, C#, Steam, Unity]; CAD [IC Station, Athena, P-Spice, Prolith, LabView, Cadence, I-Deas, Solidworks, Mentor Graphics, FreeCAD]; java image processing [ImageJ]; statistics [R, JMP, Minitab, Excel, WIP] & equipment recipes [stepper jobs, laser dicing recipes]; Project Management for Engineers, AMA; Labview Core 1, 2; Markforged 3D-Printing; Form Architecture; Security Training*

Hardware: *Training, documentation, administration & maintenance of SEM & SAM chemical systems; managed a wastewater treatment system, laser dicers, optical profilometers, ellipsometers, wet benches, sputter systems, AFMs & resist tracks; used G & I-line steppers, evaporators, CVD & plasma tools, oxidation furnaces, ovens, hot & cold plates, stylus profilometers and optical microscopes; designed cross-section tools and adhesion testers for quality; optimized FPGA inspection / vision systems and; supported Twin-Wire Arc Spray, Texture Blast ops.*

Education

Rochester **I**nstitute of **T**echnology	**Rochester, NY, USA**
B.S. Microelectronic Engineering	2000 - 2004

More Experience

Acme United – Diamond Machining Technology **Marlborough, MA, USA**
Project Engineer 2018 – 2020
New Product Development, Systemic Efficiency & Tool Creation: Electroplating, 3D Printing

Vishay UltraSource **Hollis, NH, USA**
Senior Process Engineer 2017 – 2018
Sputter Quality & Throughput – Data cartography of systemic risk, waste & throughput

Sensera Inc. **Woburn, MA, USA**
Senior Process Engineer 2017
Operations Lead – Defined priorities and plans based on quantified data, resource availability & customer needs

Woodruff Research **Marlborough, MA, USA**
Senior Advisor 2013 - 2017
Designed "Sono-Cells" and created a software to predict systemic variability

Knowles Corporation **Itasca, IL, USA**
MEMS Engineer 2013 - 2016
System Integration – Combined all backend processing, metrology, facility equipment, factory support & FA with cutting-edge characterization to decrease corporate risk through cross-functional collaboration

NanoInk Inc. – NanoGuardian **Skokie, IL, USA**
R&D Engineer 2006 - 2013
Integration of medical device business development, machine, process ownership & manufacturing development: Nanotech

Reflexite Display Optics **Rochester, NY, USA**
Quality Engineering Tech 2004 - 2006
Continuous improvement of LCD module components

Semiconductor Manufacturing Fabrication Lab **Rochester, NY, USA**
Manufacturing Engineering Co-op 2000 - 2004
Designed, processed & tested CMOS & MEMS

Analog Devices Inc. **Cambridge, MA, USA**
Yield Enhancement Co-op June - Dec 2003
Programmatically organized defect information and automated an electrical test bench to pareto all killer defects

NanoPower MEMS **Rochester, NY, USA**
Process Engineering Co-op June - Dec 2002
SEM, AFM, CMP, liftoff processes, anodization, mask creation, stress measurements, DOEs, SU-8 & carbon nanotube processing

Ferro Electronic Materials **Penn Yan, NY, USA**
CMP Engineering Co-op 1999 - 2000
Slurry formation & CMP Operation; AFM super-user, interferometry & resistivity measurements